US-PAT-NO: 5929916

DOCUMENT-IDENTIFIER: US 5929916 A

TITLE: Variable bit rate encoding

DATE-ISSUED: July 27, 1999

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APPL-NO: 08/ 578227

DATE FILED: December 26, 1995

US-CL-CURRENT: 375/240.05, 375/240.24

ABSTRACT:

   A rate control algorithm for an MPEG-2 compliant
encoder has embodiments
useful for constant bit rate and variable bit rate
encoding. In particular,
the present invention relates to variable bit rate
encoding.

4 Claims, 16 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

Detailed Description Text - DETX (103):
   As indicated above, the quantization step size
is a product of a weighting
matrix W[v][u] and a quantization **scale** factor
Q.sub.n (known also as mquant in
the **MPEG**-2 standard). There are 31 possible
(Q.sub.n). (W[v][u]) matrices in
accordance with MPEG-2. Illustratively, these
matrices are all stored at the
encoder. In addition, one or more panic matrices
may be stored. For example,
in the panic mode, if it is desirable to encode
only the DC transform
coefficient, the transform coefficients F[v][u] may
be multiplied by an element
from a panic matrix p.sub.0 [v][u], whose only
non-zero value is p.sub.0
[0][0]. If the panic is less severe, a different
panic matrix p.sub.1 [v][u]
may be utilized which has a few AC non-zero values
in addition to the DC
non-zero value. This permits the intrablocks to be
coded with a DC coefficient
and a few **non-zero AC coefficients**. In general, a
plurality of panic matrices
may be stored at the encoder with different numbers
of **non-zero AC
coefficients**. Depending on the severity of the
panic, a particular panic
matrix with a particular number of **non-zero AC
coefficients** is selected.